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**Social and Environmental Risk disclosure in Sustainability reporting. What does preliminary evidence suggest?**

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# Social and Environmental Risk disclosure in Sustainability reporting.

## What does preliminary evidence suggest?

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Recently, the new European Directive on non-financial disclosure, the American Sustainability Accounting Standard Board (SASB), the Global Reporting Initiative GRI G4 and the International Integrated Reporting Council (IIRC) have stressed the importance of extending the disclosure of ethical, social and environmental risks inside social and environmental reporting. Institutional pressure has been notably increased among organisations, especially those already recognized for their sustainability practice. Given such challenges, the reaction of corporations in providing additional sustainability risk disclosure shall be examined. Our study aims at addressing such issues from an exploratory perspective. We based our analysis on a sample of organisations that in accordance with the new GRI4 guidelines issued related disclosure in 2015. The study examined the reports and provided a risk disclosure metric to be analysed against other relevant variables. Consistently with the recent literature, we found that sustainability leaders provide a significant volume of reporting and that the quality of risk disclosure is significantly influenced by their international presence and their sustainability reporting experience. However, if we consider specific risk related areas of disclosure, only few of them seems to consistently link strategy, measures and disclosure. Moreover, organisations that face high social and environmental risks because of their business sectors behave differently. In conclusion, we aim at demonstrating the level of sustainability reporting usefulness as an external tool for banks, investors, rating agencies, and all the stakeholder interested in those internal processes and mechanisms which can affect corporate performances against risk avoidance.

**Keywords:** social and environmental risks disclosure, sustainability reporting, GRI4.

**JEL Classification:** M14, M49

## 1 Introduction

Accounting scholars and social and environmental researchers have deeply discussed the role of voluntary sustainability and CSR related disclosure, however, few of them have focused on the examination of risk disclosure required by a large set of new reporting guidelines. In order to reduce the risk of corporate “window dressing, innovative research and predictive models are needed. The risk that corporations might produce reports that will be slight, unreal, or “vague semblance of something” especially when the reporting guidelines are requiring very detailed information about risk disclosure, is indeed too high to face.

These issues call for attention and scrutiny, and therefore, our paper aims at providing an exploratory study about the impact of the new guidelines in sustainability reporting with specific attention to risk disclosure.

## 2 State of the art

Since the last two decades, an increasing number of corporations and businesses are embracing and getting interested on social and environmental issues and sustainability. However, recent business scandals and environmental disasters are emphasizing dislocations with the current model of capitalism and the need of understanding the inherent social nature of markets as well as a better way to forecast and mitigate risks.

A number of sustainability guidance bodies, as well as new standard setters are acting significantly in shaping the boundaries between voluntary and mandatory disclosure in such areas. For instance, the 2014/95/EU Directive mandates larger companies to include social and environmental information in their reports by the end of 2016. In the US, since July 2011 the Sustainability Accounting Standards Board (SASB) provides mandatory industry guidelines for the disclosure of sustainability issues in mandatory SEC companies' filings. Consistently, in South Africa, the Johannesburg Stock Exchange requires the adoption of integrated reporting since 2011; and several other Countries and Region have followed such behaviours.

If we look at the literature, environmental risk is the area which received most attention from scholars (Matten, 1999; Weinhofer and Busch, 2013). On the other hand also social risk and its effect on firm reputation has been object of several studies (Orlitzky and Benjamin, 2001; Dion, 2013)

Indeed, the links between sustainability and risk management have been addressed by using a precautionary principle approach which account for risk evaluation and evaluation (Som, Hilty, & Köhler, 2009). For instance, an increasing attention has been recently devoted to the sustainability of the supply chain and the issues that can arise, especially within developing countries' operations (Klassen and Vereecke, 2012; Graetz and Franks, 2015, O' Sullivan and O' Dwyer, 2015.). Furthermore, Dobler et al. (2014) were among the first to investigated the relationship between environmental performance, environmental risk and risk management by

finding negative association between environmental performance and environmental risk.

On the other hand, a relevant number of studies focused on the way sustainability disclosure has been carried out by organisations and how guidelines such as those issued by the GRI are applied (Marimon et al., 2012; Legendre and Coderre, 2013; Vigneau et al., 2014, Knebel and Seele, 2015, Michelon et al. 2015).

However, although sustainability disclosure has been broadly studied and investigated, there is little evidence examined risk management related contents within corporate sustainability disclosure practices. It is timely and important to understand how organisations disclose and report about risks. Specifically, the motivation of our study relies in findings preliminary answers to these questions: Are there explicit or implicit references to corporate strategy, tools or procedures within risk disclosure? To what extent the information provided illustrate the attention of the company towards risks and impacts?

## **3 Research Design**

### **3.1 Sample selection**

A sample of sustainability reports has been examined and analysed. The sample has been selected among multinational and large organisations located in Italy that in 2015 have published a sustainability report according to the new GRI4 guidelines. Banks and insurance companies have been excluded, given that financial services organisations are subject to specific financial and market risks, thus resulting to hinder comparability between other industries.

We have selected the GRI4 guidelines as they result to be a substantial effort by the Global Reporting Initiative (GRI, 2014) in order to provide a comprehensive framework, resulting to be relevant and significant for risk management strategies and related disclosure, and not only in the environmental, social and sustainability areas. GRI G4 introduces the materiality concept, requiring organizations to report only what matters and where it matters. Moreover, GRI G4 requires an organisation to determine its boundary during the materiality assessment. Therefore, lack of impact is the only thing that can exclude an entity from its organisation's boundary within GRI G4. Additionally, scope becomes a question about impact, risk and opportunity, and an organisation's boundary might be different for each material topic because the entities the organisations will affect s may be different for every reporting topic.

Our final sample is composed by 30 organisations which have been selected consistently from the GRI sustainability database. Table 1 provides a breakdown of the sample composition by industry and type of disclosure.

**Table 1** Sample breakdown by industry and reporting approach.

<i>Organisation Name</i>	<i>Industry</i>	<i>Type of Disclosure</i>	<i>Reporting period</i>
<b>Atlantia</b>	Construction & Real Estate	Integrated Report	2014
<b>Autogrill SpA</b>	Food & Beverage	Sustainability report	2014
<b>Barilla</b>	Food & Beverage	Good for You, Good for the Planet	2014
<b>CNH Industrial NV</b>	Automotive	Sustainability report	2014
<b>Colacem</b>	Construction Materials	Sustainability report	2014
<b>Costa Crociere</b>	Tourism/Leisure	Sustainability report	2014
<b>Edison</b>	Energy	Sustainability report	2014
<b>Engineering</b>	ICT	CSR report	2014
<b>ENI SpA</b>	Energy	Annual report	2014
<b>Expo Milano 2015</b>	Public Agency	Sustainability report	2015
<b>Fastweb</b>	Telecommunications	Sustainability report	2014
<b>FCA Group</b>	Automotive	Sustainability report	2014
<b>Feralpi Group</b>	Metals products	Sustainability report	2013-2014
<b>GTECH plc</b>	Entertainment	Sustainability report	2014
<b>Hera Group</b>	Energy/Utilities	Sustainability report	2014
<b>IGD</b>	Real Estate	Sustainability report	2014
<b>Italcementi Group</b>	Construction Materials	Sustainability Disclosure	2014
<b>Juventus</b>	Tourism/Leisure	Sustainability report	2015
<b>Lavazza</b>	Food & Beverage	Sustainability report	2014
<b>Mondadori</b>	Media	Sustainability report	2014
<b>Piaggio Group</b>	Automotive	CSR report	2014
<b>Pirelli Group</b>	Automotive & Energy	Annual report	2014
<b>Prysmian Group</b>	Equipment	Sustainability report	2014
<b>SABAF</b>	Metals Products	Annual report	2014
<b>Salini Impregilo</b>	Construction	Sustainability report	2014
<b>Snam</b>	Energy/Utilities	Sustainability report	2014
<b>Telecom Italia</b>	Telecommunications	Sustainability report	2014
<b>Terna</b>	Energy/Utilities	Sustainability report	2014
<b>University of Torino</b>	Higher Education	Sustainability report	2014
<b>World Duty Free</b>	Retailers	Sustainability report	2014

### 3.2 Data Analysis

According to the content of GRI G4-2, G4-14 and G4-EC2 we have prepared a checklist of relevant risk disclosure items. Consistently with previous literature in the field (Sutantoputra, 2009) such items has been scored and weighted in order to achieve a total maximum final score of 10, this score is the proxy for risk disclosure sustainability quality in our study (*SDR score*). Once the final checklist has been prepared, we used it to carry a detailed content analysis of the collected reports (Duriau et al., 2007).

Specifically, in the preliminary stage of our study, we applied descriptive statistics to address the relevant features of our sample. Subsequently, we applied multivariate statistical analysis to understand which items and related variables were significant. Specifically, due to the limitations of some data analysis techniques (i.e. Multiple regression) and the size of our sample, we adopted a Structural Equation Modelling (SEM) (Haenlein and Kaplan, 2004). SEM is a statistical technique that focuses on the analysis of variance, it is designed to simplify the relationships among the variables in order to define and find significant predictors and influences on some endogenous variables of study.

Specifically, there are two common types of structural equation modelling, namely Covariance-Based SEM (CB-SEM) and Partial Least Squares (PLS-SEM). We decided to apply PLS-SEM because, if compared to CB-SEM model resulted to be more suitable for our data. For instance, PLS-SEM methodology can be used when there are no assumptions about data distribution, applications have little available theory, sample sizes are small, and predictive accuracy is paramount (Bagozzi, 1988; Hwang et al., 2010; Wong, 2011).

We used SmartPLS 3.0 software (Ringle et al., 2015) to estimate the path model by means of empirical data. To validate the properties of a construct both measurement and structural models have been analysed simultaneously.

## 4 Findings and discussion

The first preliminary outcome of this study, is the acknowledgement that the organisations included in our sample, consistently selected from the GRI database, are disclosing sustainability information by different means of corporate report, even if they are all based in Italy. The majority provide such information by issuing a sustainability report, however, a slight minority, and specifically those who achieved several years of experience in sustainability reporting are now including such information in their “financial” annual report. Another slight minority provide sustainability disclosure within an integrated report according to the International Integrated Reporting Council guidelines (IIRC).

A great majority of the organisations in our sample belong to the Energy/Utilities sector, indeed an industry that has often been challenged by its environmental and sustainability outcomes. Another interesting finding is that all the organisations selected are private corporations with the exception of the University of Torino, a pub-

lic university, resulting to be the first in Italy to have issued a sustainability report according to GRI4.

The average organisation produces a sustainability document which is 150 pages long and it is written in English, however, there are some organisations whose reports are just 18 pages long or just published in Italian, for instance 7 out of 30 (we accounted for the ones linked via the GRI sustainability database).

The majority of the sample (66%) state a “Core” accordance with the GRI G4 guidelines, while a minority state a “comprehensive” accordance, with one corporation not stating anything about its level of adherence. Only 9 organisations have used service provided by GRI in the preparation of their report, and mainly in the areas of materiality disclosure and content indexing.

The presence of an external assurance provider is outlined by the majority of the sample, with a preference for the service of Big 4 accounting firms. However, for the majority of such organisations, the external assurance level has been only described as limited or moderate. Table 2, provides information about the nature of the external assurance provider involved.

**Table 2** Number and typology of external assurance provided.

External ASSURANCE	Type of Provider			TOTAL
	Big 4	Quality Cert.	Small Practice	
<b>YES</b>	17	2	3	<b>22</b>
<b>NO</b>	-	-	-	<b>8</b>
<b>TOTAL sample</b>				<b>30</b>

A minor amount of organisations, just 3 of them, requested the opinion of a group of stakeholders or experts for the preparation of their disclosure.

In addition to GRI G4, if we look at further reporting compliance we found that on the one hand, the most reports stated compliance with UNGC (United Nations Global Compact), a sustainability framework for businesses, whose principles relate to areas such as human rights, labour, the environment and anti-corruption. Interestingly, on the other hand, none of the organisations in our sample adopted the sustainability framework developed by the International Finance Corporation (IFC), an entity which is part of the World Bank Group. A large number of organisations resulted to be compliant with CDP’s (Carbon Disclosure Project) reporting framework as well as the ISO 26000 guidance on social responsibility.

Figure 1 provides a chart outlining the guidelines/frameworks adopted by the organisations in our sample, as well as the presence of the opinion from a stakeholder or expert panel.



**Figure 2** Reporting Guidelines and opinions.

The content analysis of the reports allowed for the computation of a Sustainability Risk Disclosure Score (SRD score) according to the content items presented in the previous section. We analysed the Shapiro-Wilk test for normality, and the *SRD score* resulted to be negatively skewed, and therefore not normally distributed.

The descriptive statistics of the *SRD score* together with the other relevant variables included in the multivariate analysis are provided in Table 3.

**Table 2** Descriptive statistics of the main variables of the study.

Variable	Min	Max	Mean	Std. Dev.
<i>SRD score</i>	0	10	6.72	1.25
<i>External Assurance</i>	0	1	0.73	0.45
<i>Nr. of total assured reports</i>	0	13	4.34	2.34
<i>International Presence</i>	0	79	4.24	15.23
<i>% of International revenue</i>	0	0.87	0.13	0.34
<i>Total Years of sustainability reporting</i>	0	15	6.45	2.43

Specifically, we developed a SEM-PLS model according to the relevant features arising from the study. Importantly, the model tested for the effect of the presence of external assurance, international presence, and importantly sustainability experience on the level of risk sustainability disclosure (measured by the *SRD score*), by moderating/controlling for the effect of the industry and level of profitability (ROA).

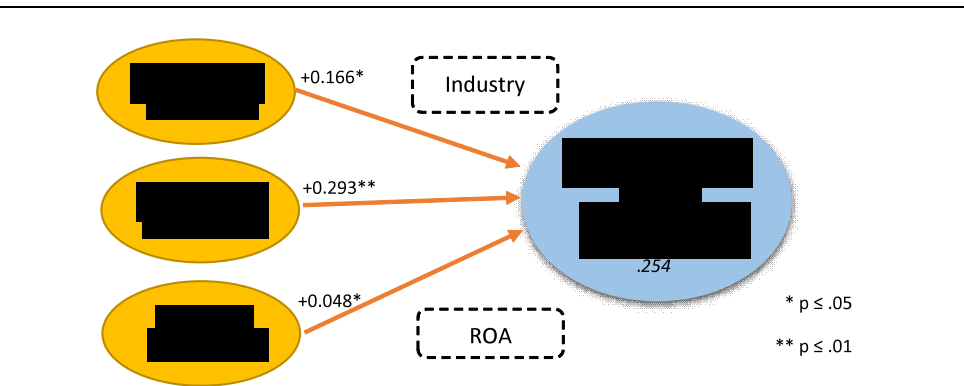
The analysis of the different variables resulted to have high loadings on their respective construct confirming convergent validity. Moreover all items had low crossloadings which verified discriminant validity. Additionally, composite reliability indices of all the constructs exceeded 0.8 (Nunnally, 1978) and the Average Variances Extracted (AVE) from the manifest indicators were all higher than the recommended value of 0.5 (Chin, 1998). Overall, the PLS-SEM results attested discrimi-



nant validity, convergent validity and reliability of the analysed constructs. Table 3 provides the different indicator loadings, reliability and latent variables' composite reliability and average variance extracted (AVE) scores. The resulting model and its paths are provided in Figure 2.

**Table 3** PLS-SEM Variables, analysis of Reliability and Validity scores.

Latent Variables	Indicators	Load-ings	Indicator Reliability	Composite reliability	AVE
International Presence	<i>Countries of presence</i>	0.935	0.874	0.8124	0.544
	<i>% of International Revenue</i>	0.815	0.664		
Sustainability Experience	<i>Total Years of Sustainability reporting</i>	0.900	0.811	0.8675	0.6876
	<i>Nr. Of pages</i>	0.785	0.616		
External As-surance	<i>Presence of External As-surance</i>	0.766	0.587	0.9139	0.6393
	<i>Nr. Assured reports</i>	0.753	0.567		



**Figure 2** Model paths and coefficients for Sustainability Risk Disclosure.

The model presented in Figure 2, highlights that the latent exogenous constructs significantly explain more than 25% of the variance of our Sustainability Risk Disclosure score (adjusted R<sup>2</sup> .254). Specifically, the presence of External Assurance does not have a significant effect on the SRD score, while both International presence (coefficient of +0.17, p<.05) and importantly Sustainability Experience (coefficient of

+0.29,  $p < .01$ ) have significant positive influence SRD Score. In other words, more are the number of sustainability reports published during the last twenty years and more likely the organisation could provide higher quality sustainability risk disclosure, the same applies for the international presence which positively affects the level of risk disclosure.

Finally, controlling for industry effects and financial performance of the organisation (average of ROA ) didn't provide any significant influence on the PLS model. The latent variables defined in the PLS-SEM model resulted to be discriminant valid, this test has been carried out by checking if the square root of the variables' AVE is larger than the correlation scores between the other latent variables; (Fornell and Larcker, 1981); Table 4 provides the related results of this test.

**Table 4** Discriminant Validity Analysis of the PLS-SEM model latent variables.

	International Presence	Sustainability Experience	Assurance	Sustainability Risk Disclosure
International Presence	0.738			
Sustainability Experience	0.074	0.829		
Assurance	0.053	0.061	0.800	
Sustainability Risk Disclosure	0.142	0.276	0.078	Single item construct

## 5 Conclusions

This paper aimed at providing a preliminary contribution in the sustainability and risk management areas of research. Importantly, we addressed the main sustainability reporting features and related risk disclosure practice of a sample of Italian organisations with worldwide operations. Furthermore, we tested which variables influenced their sustainability risk disclosure, by computing a score based on the content analysis of their latest sustainability report. Our findings show that international presence and sustainability experience are important factors contributing to the quality of risk disclosure in sustainability reporting, on the contrary, the presence of external assurance does not seem to affect risk disclosure quality.

Our study is not free from limitations; above all, we need to increase the size of the sample and control for cross-countries behaviours by including, for instance, other European organisations. The collection of further evidences should relate to the disclosure of risk management tools, the typology of ethical, social and environmental risks that have been illustrated in the reports and the typologies of social and environmental impact forecasts.

Our research demonstrates the level of usefulness of sustainability reporting as an external tool for banks, investors, rating agencies, and all the stakeholders interested in those internal processes and mechanisms, which can affect corporate performance against risk avoidance.

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